TABLE 2. — *Measurements of constituents released by the combustion of tobacco products in various situations*
[Cig = cigarettes; — = unknown; TPM = total particulate matter]

Reference, Location, and Dimensions If Known	Ventilation	Amount of Tobacco Burned	Constituents
Harke, H.-P., et al. (*IS 44*)			
Mid-size European car, engine off, in wind tunnel at 50 km/hr wind speed	None	9 cig	30 ppm CO
	Air jets open & blower off	6 cig	20 ppm CO
	Air jets open & blower on	6 cig	10 ppm CO
Mid-size European car, engine off, in wind tunnel at zero km/hr wind speed	None	9 cig	110 ppm CO
	None	6 cig	80 ppm CO
	Air jets open & blower on	6 cig	8-10 ppm CO
Harke, H.-P., Peters, H. (*IS 43*)			
Car in traffic	None	4 cig	21.4 ppm CO
Srch, M. (*IS 35*)			
Car, engine off—2.09 m^3	None	10 cig in 1 hr	90 ppm CO, Smokers 10% COHb; Nonsmokers 5% COHb
Seiff, H.E. (*IS 34*)			
Intercity buses	15 air changes per hr	23 cig (burning continuously)	33 ppm CO (at driver's seat)
		3 cig (burning continuously)	18 ppm CO (at driver's seat)
U.S. Dept. Transportation, et al. (*IS 37*)			
Airplane flights:			
Overseas—100% filled	15-20 air changes per hr	—	2-5 ppm CO, <.120 mg/m^3 TPM
Domestic—66% filled	do.	—	<2 ppm CO, <.120 mg/m^3 TPM

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Source: https://www.industrydocuments.ucsf.edu/docs/hzyk0001

TABLE 2. — *Measurements of constituents released by the combustion of tobacco products in various situations — Continued*
[Cig = cigarettes; — = unknown; TPM = total particulate matter]

Reference, Location, and Dimensions If Known	Ventilation	Amount of Tobacco Burned	Constituents
Cano, J.P., et al. (*IS 12*)			
Submarines–66 m^3	Yes	157 cig per day	<40 ppm CO, 32 $\mu g/m^3$ Nicotine
		94-103 cig per day	<40 ppm CO, 15-35 $\mu g/m^3$ Nicotine
Godin, G., et al. (*IS 20*)			
Ferry boat compartments:			
Smoking	—	—	18.4 ±8.7 ppm CO
Nonsmoking	—	—	3.0±2.4 ppm CO
Theater:			
Foyer	—	—	3.4±0.8 ppm CO
Auditorium	—	—	1.4±0.8 ppm CO
Bridge, D.P., Corn, M. (*IS 9*)			
Party rooms:			
145 m^3	7 air changes per hr	50 cig & 17 cigars in 1.5 hr	7 ppm CO
101 m^3	10.6 air changes per hr	63 cig & 10 cigars in 1.5 hr	9 ppm CO
Harke, H.-P., et al. (*IS 24*)			
Room–38.2 m^3	None	30 cig per 13 min (by machine)	64 ppm CO, 510 $\mu g/m^3$ Nicotine .46 mg/m^3 Acrolein 6.5 mg/m^3 Acetaldehyde
		5 cig per 13 min (by machine)	11.5 ppm CO, 60 $\mu g/m^3$ Nicotine, .07 mg/m^3 Acrolein, 1.3 mg/m^3 Acetaldehyde
Harke, H.-P. (*IS 50*)			
Office Bldg	Air conditioned	—	<5 ppm CO
Office Bldg	Not air conditioned	—	<5 ppm CO
Room–78.3 m^3	—	3 smokers	15.6 ppm CO

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Source: https://www.industrydocuments.ucsf.edu/docs/hzyk0001

TABLE 2. – *Measurements of constituents released by the combustion of tobacco products in various situations – Continued*

[Cig = cigarettes; — = unknown; TPM = total particulate matter]

Reference, Location, and Dimensions If Known	Ventilation	Amount of Tobacco Burned	Constituents
Harke, H.-P., (*IS 22*)			
Room–57 m^3	None	42 cig (by machine)	50 ppm CO, 530 $\mu g/m^3$ Nicotine
	7.2 air changes per hr	42 cig do.	10 ppm CO, 120 $\mu g/m^3$ Nicotine
	8.4 air changes per hr	42 cig do.	<10 ppm CO, <100 $\mu g/m^3$ Nicotine
	None	9 cigars do.	60 ppm CO, 1040 $\mu g/m^3$ Nicotine
	7.2 air changes per hr	9 cigars do.	20 ppm CO, 420 $\mu g/m^3$ Nicotine
	None	9 pipes do.	10 ppm CO, 520 $\mu g/m^3$ Nicotine
	7.2 air changes per hr	9 pipes do.	<10 ppm CO, <100 $\mu g/m^3$ Nicotine
Room–170 m^3	None	105 cig	30 ppm CO, Smokers 7.5% COHb Nonsmokers 2.1% COHb
	1.2 air changes per hr	107 cig	5 ppm CO, Smokers 5.8% COHb Nonsmokers 1.3% COHb
	2.3 air changes per hr	101 cig	75 ppm CO, Smokers 5.0% COHb Nonsmokers 1.6% COHb
Anderson, G., Dalhamn, T. (*IS 2*)			
Room–80 m^3	6.4 air changes per hr	46 cig & 3 pipefuls	4.5 ppm CO, 377 $\mu g/m^3$ Nicotine, 3.0 mg/m^3 TPM
Russell, M.A.H., et al. (*IS 31*)			
Room–43 m^3	None	80 cig & 2 cigars per hr	38 ppm CO, Smokers 9.6% COHb Nonsmokers 2.6% COHb
Harmsen, H., Effenberger, E. (*IS 45*)			
Room–93 m^3	None	62 cig in 2 hrs	80 ppm CO, 5200 $\mu g/m^3$ Nicotine
Hoegg, U.R. (*IS 46, 47*)			
Sealed test chamber–25 m^3	None	4 cig	12.2 ppm CO, 2.28 mg/m^3 TPM
		8 cig	25.6 ppm CO, 5.39 mg/m^3 TPM
		16 cig	47.0 ppm CO, 11.41 mg/m^3 TPM
		24 cig	69.8 ppm CO, 16.65 mg/m^3 TPM

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Source: https://www.industrydocuments.ucsf.edu/docs/hzyk0001

TABLE 4. — *Mean percent of carboxyhemoglobin saturation in smokers and nonsmokers by employment status*

	Nonsmokers		Smokers[1]	
	No.	$\bar{X} \pm S_{\bar{X}}$	No.	$\bar{X} \pm S_{\bar{X}}$
Persons employed	8,478	0.89 ± 0.01	5,962	4.61 ± 0.03
Classed as industrial workers[1]	1,523	1.38 ± 0.04	1,738	5.01 ± 0.06
Classed as workers other than industrial	6,955	0.78 ± 0.01	4,224	4.44 ± 0.04
Persons not employed	1,678	0.63 ± 0.02	531	4.24 ± 0.11

[1]Industrial workers are employed in either durable or nondurable goods manufacturing (craftsmen, operatives, or laborers). Smokers are defined as those who smoked on the day of giving blood.

NOTE. — $\bar{X}$ = mean percent; $S_{\bar{X}}$ = standard error of mean percent.

Source: Kahn, A., et al. (*CO 134*).

TABLE 5. — *Median percent carboxyhemoglobin (COHb) saturation and 90 percent range for smokers and nonsmokers by location*

Location	Cigarette Smokers		Nonsmokers	
	Median	Range	Median	Range
Anchorage	4.7	0.9 – 9.5	1.5	0.6 – 3.2
Chicago	5.8	2.0 – 9.9	1.7	1.0 – 3.2
Denver	5.5	2.0 – 9.8	2.0	0.9 – 3.7
Detroit	5.6	1.6 – 10.4	1.6	0.7 – 2.7
Honolulu	4.9	1.6 – 9.0	1.4	0.7 – 2.5
Houston	3.2	1.0 – 7.8	1.2	0.6 – 3.5
Los Angeles	6.2	2.0 – 10.3	1.8	1.0 – 3.0
Miami	5.0	1.2 – 9.7	1.2	0.4 – 3.0
Milwaukee	4.2	1.0 – 8.9	1.2	0.5 – 2.5
New Orleans	5.5	2.0 – 9.6	1.6	1.0 – 3.0
New York	4.8	1.2 – 9.1	1.2	0.6 – 2.5
Phoenix	4.1	0.9 – 8.7	1.2	0.5 – 2.5
St. Louis	5.1	1.7 – 9.2	1.4	0.9 – 2.1
Salt Lake City	5.1	1.5 – 9.5	1.2	0.6 – 2.5
San Francisco	5.4	1.6 – 9.8	1.5	0.8 – 2.7
Seattle	5.7	1.7 – 9.6	1.5	0.8 – 2.7
Vermont, New Hampshire	4.8	1.4 – 9.0	1.2	0.8 – 2.1
Washington, DC	4.9	1.2 – 8.4	1.2	0.6 – 2.5

Source: Stewart, R.D., et al. (*CO 135*).

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Source: https://www.industrydocuments.ucsf.edu/docs/hzyk0001